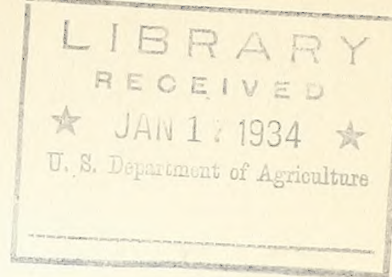


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PLANT INTRODUCTIONS

TWENTY-SECOND ANNUAL DESCRIPTIVE LIST

Season 1933-4

Containing Descriptions of the More Important
Introduced Plants Now Ready
for Listed Experimenters

Division of Foreign Plant Introduction
Bureau of Plant Industry
United States Department of Agriculture
Washington, D. C.

All plants sent out by this Division to experimenters are inspected at the Plant Introduction Gardens by officers of the Bureau of Plant Quarantine. At the time this Annual List goes to press the inspection has not been made. It is possible, therefore, that quarantine regulations may prevent the sending out of a few plants herein described.

PLANT INTRODUCTIONS.

Experimenters will please read carefully this introductory note before sending in their requests for plant material.

This the Twenty-second Annual List of Plant Introductions, contains descriptions of many new and rare plants, not yet widely tested in this country. The available information concerning some of them is meager, and it is therefore impossible to speak with assurance regarding their value, their cultural requirements, and their adaptability to the various climates and soils of the United States.

These plants have been imported because it is believed some direct or indirect use can be made of them. They are first placed at the disposal of the experts engaged in plant breeding, crop acclimatization, and horticultural investigations generally in the United States Department of Agriculture and the State Experiment Stations. Some of them have been grown in sufficient quantity, however, so that they can be distributed to some private experimenters who have the facilities to test them carefully. The List is therefore sent to those who have qualified as experimenters with the Division of Foreign Plant Introduction, and who have indicated a willingness to care for material sent them.

Accompanying this Annual List are complete Check Lists showing all plants available for distribution at the several Plant Introduction Gardens during the season 1933-4 and the Garden from which available. Applicants for material should fill out all blanks at the top of the Check List of each garden from which they request plants, place a mark to the left of the F. P. I. (Foreign Plant Introduction) number of each plant desired, and return the lists promptly to this Division. Items marked with an asterisk (*) are available in somewhat larger numbers, for propagating purposes, to interested nurserymen having exceptional facilities.

It should be distinctly understood that the Division does not agree to supply all the plants requested. It reserves the right to limit the number or to withhold the entire request of any experimenter in order that it may place the material according to its best judgment.

The shipping season extends, as a rule, from December first to April first. Because of the large quantity of plants which must be handled, it is difficult for the Division to single out individual requests and ship them at a certain date; where there are valid reasons, however, for requesting that material be sent at a specified time, every effort will be made to meet the requests.

These plants are placed in the hands of experimenters with the understanding that reports on their behavior will be sent to this Division from time to time. It is particularly desired that reports be sent regarding the flowering, fruiting, hardiness, utilization and other interesting features of plants which have been sent for trial; and it is expected that experimenters will at all times preserve the original labels sent with the plants, or accurate plats showing the location and F. P. I. number of each one. Failure to comply with these directions will be considered sufficient reason for a discontinuance of the cooperative relation.

Janice S. Brown
JAN 17 1934

It will be necessary for experimenters to preserve and refer to the Annual Lists of Plant Introductions or to the Inventories published by the Division, for information regarding the plants. Each Inventory lists the seeds and plants imported during a period of three months. Its object is to serve as an historical record; it is not printed immediately following the arrival of the plants, but eighteen to twenty-four months later. The edition is limited, and it cannot be supplied to all experimenters. This makes essential the preservation of the annual descriptive list as a work of reference, and the Division desires to urge upon its cooperators the importance of this step. Unless the Annual lists are preserved, the Division later will be flooded with inquiries from persons who have received plants and who desire information concerning them. Answering such inquiries involves much unnecessary labor and expense.

For convenience in using the descriptive list, after each description is given in parenthesis the name of the garden or gardens at which the plants are being grown.

Descriptive List

Numbers preceding plant names are F. P. I. numbers and, in correspondence concerning any plant, both number and name always must be given.

Nurserymen please see statement at end of paragraph 3 of introductory note, concerning items marked with an asterisk (*).

91490. ACACIA SP. From South Australia. Presented by J. Howard Johnson, St. Peters. Dead finish. A low shrub, 10 to 12 feet high, with dull-green, needle-like foliage and yellow flowers. The trunk and branches are particularly crooked, so that the wood can only be used for veneers and in making small articles such as souvenirs, pipes, etc., although the marking of the heavy dark-red wood is very beautiful. The native Australians used this wood to make their boomerangs. The shrub grows in limestone soil, with little water. For trial in the warmest sections of the southwest. (Chico, Calif.)

59672. ACACIA AURICULAEFORMIS. From Lucknow, India. Presented by the Superintendent, Government Horticultural Gardens. A quick-growing medium-sized ornamental evergreen tree with somewhat spreading and drooping branches. In southern Florida a height of 15 feet was attained in three years. True leaves are replaced by falcate-lanceolate phyllodes up to 8 inches long and about $1\frac{1}{4}$ inches wide. The flowers are yellow and fragrant. Cold resistance uncertain. For trial as a street and park tree in the warmer parts of California and the Gulf region. (Chico, Calif.)

94235. ACACIA GIRAFFAE. From the Union of South Africa. Presented by M. Wilman, McGregor Museum, Kimberley. The Kameel-doorn, of the Transvaal, a valuable tree for arid regions in the warm temperate zone. The ripe pods are eaten greedily by stock. The tree thrives in sandy soil, attains a large size, and the dark reddish brown wood is used by the natives in making spoons, knife-handles, etc. For trial in the Gulf region and the warmer parts of the southwest. (Glenn Dale, Md.)

94236. ACACIA HORRIDA. From the Union of South Africa. Presented by M. Wilman, McGregor Museum, Kimberley. A spreading, flat-topped, spiny tree, about 20 feet high, widely distributed throughout South Africa. The fragrant yellow flower-heads are often visited by bees, but the main value of the tree in South Africa is as a shade for live stock. For trial in the Gulf region and the warmer parts of the Southwest. (Glenn Dale, Md.)

101400. AGASTACHE RUGOSA. Menthaceae. From Manchuria. Presented by B. W. Skvortzow, Harbin. A somewhat ornamental perennial $1\frac{1}{2}$ - 2 feet high, resembling catnip but being much more attractive. The ovate leaves are coarsely serrate and, when crushed, yield an aroma suggesting mint, pennyroyal and lemon. The lavender flowers are faintly scented like the crushed leaves. They are borne in spikes 2 - 3 inches long and, near Washington, D. C., begin to appear on the terminal shoot and upper branches in mid-August. For trial in all except the warmer parts of the United States. (Glenn Dale, Md.)

102586 AGAVE BREVISPIA. From Kenscoff, Haiti. Collected by the Allison V. Armour Expedition. A stemless, but not caespitose agave, with dull dark-green, broadly lanceolate leaves 3 feet or more long, having small dull-brown spines and narrowly triangular prickles. The yellow flowers are in a dense cluster on a scape 12 feet high. Native to Haiti. For trial in southern Florida and southern California. (Glenn Dale, Md.)

86165. ALBUCA NELSONI. Liliaceae. From South Africa. Presented by Miss Olive Abernathy, Lismore, Umtata, Cape of Good Hope. An herbaceous perennial with a globose bulb 3 to 4 inches in diameter, four to six bright-green lanceolate leaves 4 feet long and 2 inches wide at the base, and a stout erect peduncle, 3 feet high bearing a lax raceme a foot long, almond-scented white flowers, 1 to 2 inches long, broadly banded with greenish or reddish brown. The three outer petals are spreading and the three inner are shorter and joined together. Native to South Africa. For trial indoors only except in the Gulf region and southern California. (Glenn Dale, Md.)

97944. ALNUS HIRSUTA SIBIRICA. From Japan. Presented by M. Tozawa, Director, Forest Experiment Station, Keijo. A handsome tree, native to Siberia, 60 feet high, of broad-pyramidal habit and vigorous growth, with broadly ovate leaves about 5 inches long, which are dark green above and glaucous beneath. For trial in all except the coldest parts of the northern states. (Glenn Dale, Md.)

94242. ALOE SCHLECHTERI. From the Union of South Africa. Presented by the McGregor Museum, Kimberley. An aloe with olive-green leaves about 8 inches long, armed on the margin with brown horny deltoid prickles. The light-yellow flowers are in dense racemes about 6 inches long on short peduncles. For indoor culture only except in the Gulf region and southern California. (Glenn Dale and Chico.)

98010. ALOE SCHLECHTERI. Same source and description as for preceding number (94242). (Glenn Dale, Md.)

81139 and 88738. ALOE STRIATA. Variety Hanburiana. From Ventimiglia, Italy. Presented by S. W. McLeod Braggins, Superintendent, La Mortola. A fleshy plant with a short stem, 1 to 2 feet in old plants, and a rosette of 12 to 30 oblong-lanceolate glaucous leaves $1\frac{1}{2}$ to 2 feet long, with a cartilaginous reddish margin. The bright-red flowers are in capitate racemes on a stout much-branched inflorescence. Native to the coast of South Africa. For indoor culture only except in the Gulf region and southern California. (Glenn Dale, Md.)

89678. ALOE VACMBE. From Madagascar. Presented by Rev. Andrew Burgess, Behara, through C. F. Swingle, Bureau of Plant Industry. A large fleshy plant, becoming about 25 feet high, native to sandy places in southwest Madagascar. It has incurved reddish spiny leaves 4 feet long, and reddish orange flowers in an erect head of 50 to 70 flowers. For indoor culture only except in the Gulf region and southern California. (Glenn Dale, Md.)

99787. ALONSOA ACUTIFOLIA. Alonsoa. From Peru. Collected by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. Collected at 11,500 feet altitude, in open alpine meadow. An ornamental herb 2 feet high with leaves broad-lanceolate, sharply toothed and bearing orange flowers. It may be grown outside as an annual or indoors in pots for winter blooming. (Glenn Dale, Md.)

85730 AMPELOPSIS BREVIPEDUNCULATA MAXIMOWICZII. Vitaceae. From Japan. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. A vigorous climbing, deciduous, grapelike, woody vine with broadly cordate, deeply 3- to 5-lobed leaves, which are coarsely serrate; dark green above and lighter beneath. The cymes of inconspicuous flowers are followed by fruits about a quarter of an inch across, changing from pale lilac to verdigris color and finally to bright blue. Native to eastern Asia. For trial in all except the colder parts of the northern states. (Glenn Dale, Md.)

41395. AMYGDALUS PERSICA. Dwarf Peach. From Kiayingchau, Kwantung, China. Presented by George Campbell. A dwarf, evergreen, ornamental Chinese peach with showy flowers, grown in its native land as a house plant. At the Plant Introduction Garden, Chico, California, a tree of this variety is about 7 feet high, with a spread of 10 feet, and with deep-green, heavy, compact evergreen foliage. The small clingstone fruit is fragrant but of inferior quality. Ripening season at Chico, early September. Plants budded on Indian Blood peach stocks. (Chico, Calif.)

76931. ANIGOZANTHOS FLAVIDA. Amaryllidaceae. From Melbourne, Australia. Presented by Mrs. Frieda C. Blanchard. An herbaceous perennial, native to western Australia with a thick underground stem, linear radical leaves 1 to 2 feet long, and a 4-foot stalk bearing a much-branched panicle of tubular flowers. The flowers and stems of the panicle are covered with a greenish red wool. For trial in the southern United States. (Chico, Calif.)

77543. ARTHROPODIUM CIRRHATUM. Liliaceae. From Nelson, New Zealand. Presented by A. Wilkinson, New Zealand Alpine and Rock Garden Society. An herbaceous perennial bearing tall somewhat branched stalks, with small leafy bracts subtending the drooping white flowers. These are about 1 inch in diameter with slender tube and reflexed but spreading lobes and conspicuous stamens and pistil, somewhat like Anthericum. For trial in the southeastern states and the Pacific northwest. (Chico, Calif.)

90657. BETULA COSTATA. Birch. From Manchuria. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. A handsome graceful tree up to 100 feet high, with grayish brown bark exfoliating in papery flakes. Leaves ovate to oblong-ovate, 2-3 inches long, long-acuminate, doubly serrate. For trial in the upper southern and the milder parts of the northern states. (Glenn Dale, Md.)

78432. BRYOPHYLLUM TUBIFLORUM. Crassulaceae. From Madagascar. Collected by Charles F. Swingle, Bureau of Plant Industry, and Dr. Henri Humbert, University of Algiers, Algeria. An erect succulent perennial, about 2 feet high, native to Madagascar. The green cylindrical leaves, irregularly striped and blotched with reddish green, bear pseudo-bulbils at the summit. These mature at the approach of the wet season and furnish means by which the plant may be propagated. The red flowers are produced in a rather dense cluster terminating the stem. For trial in the Gulf region and southern California. (Glenn Dale, Md.)

100516. BUDDLEIA FALLOWIANA. From China. Collected by the sixth Forrest expedition in southwestern China, and presented by Henry McLaren, Bodant, Tay-y-Cafn, N. Wales. A graceful shrubby plant with silvery woolly foliage and dense cylindrical spikes of small, white, fragrant flowers with orange centers. For trial in the southern states and on the Pacific coast. (Chico, Calif.)

100859. BUDDLEIA FALLOWIANA. Same source and description as for preceding (No. 100516). (Chico, Calif.)

98367. BUDDLEIA LINDLEYANA. Lindley butterflybush. From China. Presented by the Director, Botanic Garden, Sun Yat-Sen Memorial Park, Nanking. An upright shrub 6 to 8 feet high from Chekiang Province. The branchlets are four angled and slightly winged, and the ovate to oblong-lanceolate leaves are 2 to 4 inches long, with remotely denticulate margins. The purple-violet flowers are in rather dense upright spikes 6 to 8 inches long. For trial from Tennessee southward and on the Pacific coast. (Chico, Calif.)

23012. BUXUS HARLANDII. Box. From Hangchow, Chekiang, China. This Chinese species is almost as slow in growth as the dwarf box commonly used for edgings. It differs from this chiefly in its longer leaves, often $1\frac{1}{2}$ inches long on vigorous shoots, and its tendency to form rather broad, flat-topped bushes. The species suffers from winter-killing near Washington, D. C. For trial in the southern states and California. (Chico, Calif.)

76598. BUXUS HARLANDII. From Elstree, Herts, England. Plants presented by the late Hon. Vicary Gibbs, Aldenham House Gardens. Same description as for preceding (F. P. I. No. 23012). (Glenn Dale, Md.)

77823. CALLICARPA GIRALDIANA. Verbenaceae. From Jamaica Plain, Mass. Plants grown from seeds collected at the Arnold Arboretum by Paul Russell, Bureau of Plant Industry. A deciduous Chinese shrub 10 feet high, with membranous light-green leaves, cymes of pink flowers, and dense clusters of round berrylike, violet fruits which hang on after the leaves have fallen. For trial in the upper south and all except the coldest parts of the northern states. (Glenn Dale, Md.)

99724. CALLICARPA RUBELLA. Beautyberry. Presented by the Curator, Lloyd Botanic Garden, Darjeeling, India. A shrub or small tree up to 20 feet high, native to India and China. The obovate tomentose leaves are 5 inches long, and the small pink flowers, in axillary cymes, are followed by purple berries. Collected at 3,000 feet altitude. For trial in the lower south and in southern California. (Glenn Dale, Md.)

91787. CALLISTEMON CITRINUS. Lemon bottlebrush. From the Botanic Garden, Hong Kong, China, through Prof. J. G. Jack, Arnold Arboretum, Jamaica Plain, Mass. An evergreen shrub or small tree up to 20 feet high, with lanceolate leaves 1 to 3 inches long, reddish when young, lemon-scented when crushed, and spikes, 2 to 4 inches long, of small flowers with long bright-red stamens. It holds its seed pods for several years. Native to southeastern Australia. For trial in California and the Gulf region. (Chico, Calif.)

98162. CALLISTEMON CITRINUS.* Lemon bottlebrush. From Australia. Presented by F. H. Baker, Richmond. Same description as for preceding. (Chico, Calif.)

101198. CALLISTEMON RUGULOSUS. Bottlebrush. From Edwin Ashby, Wittunga, Blackwood, Australia. A shrub, native to Australia, up to 12 feet high, with narrowly lanceolate leaves 1 to 3 inches long, and clusters of flowers having crimson filaments and yellow anthers. For trial in California and the Gulf region. (Glenn Dale, Md.)

67069. CALOTHAMNUS ASPER. Myrtaceae. From Blackwood, South Australia. Presented by Edwin Ashby. A hairy shrub, with crowded, linear, flat leaves, and short dense clusters of flowers with crimson stamens. Native to Western Australia. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

101200. CALOTHAMNUS ASPER. From the same source as preceding (No. 67069). (Glenn Dale, Md.)

64478. CALOTHAMNUS CHRYSANTHERUS. From Blackwood, South Australia. Presented by W. L. Wheeler, through Edwin Ashby. A rather small erect shrub, native to Western Australia, with thick corky branches, and thick, terete, sharp-pointed leaves 2 to 4 inches long. The chief beauty of the shrub lies in the bundles of deep-red stamens which protrude an inch or more from the yellowish flowers. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

101202. CALOTHAMNUS LONGISSIMUS. From Edwin Ashby, Wittunga, Blackwood, Australia. A low shrub, native to Western Australia, with softly pubescent corky branchlets. The terete leaves are 6 to 12 inches long, and the small flowers, imbedded in the swollen corky stem, have several bundles of stamens nearly an inch long. For trial in the Gulf region and southern California. (Glenn Dale, Md.)

67071. CALOTHAMNUS QUADRIFIDUS. From Blackwood, Australia. Presented by Edwin Ashby. An erect evergreen shrub 7 feet high, with crowded linear leaves about an inch long, and dense spikes of flowers which are conspicuous because of the long, rich-crimson stamens. Native to Western Australia. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

101203. CALOTHAMNUS QUADRIFIDUS. From the same source as preceding (F. P. I. No. 67071). (Glenn Dale, Md.)

90341-2. CARAGANA PEKINENSIS. Pea-shrub. From China. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, in a small canyon on the rocky mountain side near the Tau Chou Ssu Temple, Chihli Province. A deciduous shrub, closely related to Caragana microphylla, with compound leaves composed of oblong or rounded-elliptic, silky-hairy leaflets about $\frac{1}{4}$ inch long, small yellow flowers $\frac{1}{5}$ inch long, and flat hairy pods. Native to northeastern China. For trial in the upper south and all except the coldest parts of the northern states. (Glenn Dale, Md.)

77177. CARMICHAELIA ODORATA. Fabaceae. From Wanganui, New Zealand. Presented by the Town Clerk, Wanganui City Council. A much-branched New Zealand shrub, related to the brooms, 3 to 10 feet high, leafy in the spring and summer. The slender erect racemes of purple flowers are borne on pendulous branches. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

62703. CARYOPTERIS TANGUTICA. Verbenaceae. From Elstree, Herts, England. Presented by the late Vicary Gibbs, Aldenham House Gardens. A deciduous ornamental shrub growing 4 to 6 feet high, native to northwest China. It has opposite, ovate leaves 1 to 2 inches long and numerous, axillary cymes of violet-blue flowers in summer. For trial in all but the most northern states. (Glenn Dale, Md.)

90850. CASSIA ARTEMISIOIDES. Wormwood senna. From New South Wales, Australia. Presented by the Director, Botanic Gardens, Sydney. An erect bushy shrub covered with silky white tomentum. The leaves are made up of 3 to 6 pairs of linear-terete leaflets 1 inch long, and the yellow flowers are in short dense racemes. It is native to Australia. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

73408. CASSINIA FULVIDA. Asteraceae. From England. Presented by the late Hon. Vicary Gibbs, Aldenham House Gardens, Elstree, Herts. An ornamental heath-like shrub having leaves with a rusty tomentum on the lower surface. The white flowers are in corymbs. Native to New Zealand. For trial from Philadelphia southward and on the Pacific coast. (Glenn Dale, Md.)

73410. CASSINIA VAUVILLIERSII. From England. Presented by the late Hon. Vicary Gibbs, Aldenham House Gardens, Elstree, Herts. An erect compact shrub, 6 to 10 feet high, with small narrow leathery leaves half an inch long, having the lower surface covered with a silvery tomentum. The white flowers are in dense terminal corymbs. Native to New Zealand. For trial in California and the less humid parts of the Gulf region. (Glenn Dale, Md.)

95376. CASUARINA LUEHMANNI. Bull oak. From Australia. Presented by the Senior Plant Introduction Officer, Commonwealth Forestry Bureau, Canberra. A tree 80 to 100 feet high, with light-colored branchlets and flattened cones half an inch in diameter. The wood is hard and close-grained. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

90141. CELASTRUS ARTICULATUS. Oriental bittersweet. From the mountain region near Dairen, Manchuria. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. A climbing shrub with branches to 30 feet long; leaves generally suborbicular with crenate margin. The abundant fruits are at first green and pea shaped, but in late autumn the valves open and turn back to reveal their golden-yellow inner surface and the shining scarlet arils containing the seeds within. The open fruits persist for two months. For trial from Massachusetts and northern Ohio southward to the Gulf and on the Pacific coast. (Glenn Dale, Md.)

90658. CELASTRUS ARTICULATUS. Oriental bittersweet. From Manchuria. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Same description as for F. P. I. No. 90141. (Glenn Dale, Md.)

103772. CELASTRUS ARTICULATUS. Oriental bittersweet. From near Nankou, China. Collected by Dorsett and Morse, agricultural explorers, Bureau of Plant Industry. Same description as for F. P. I. No. 90141. (Glenn Dale, Md.)

99154. *CELTIS KORAIENSIS*. Hackberry. From Kweichow Province, China. Presented by Albert N. Steward, Department of Botany, College of Agriculture, University of Nanking, Nanking. Chien Chiu Tze. A tree up to 40 feet high with coarsely serrate, broadly ovate leaves 4 to 6 inches long, and dull-orange ovoid fruits a quarter of an inch long. For trial in the south and the milder parts of the northern states. (Glenn Dale, Md.)

37954. *CHAENOMELES LAGENARIA CATHAYENSIS*. Flowering quince. From Shantung, China. Collected by the late Frank N. Meyer, agricultural explorer, Bureau of Plant Industry. Seedlings of a variety used by the Chinese to perfume their living rooms but used by foreign missionaries to make preserves and jellies. For trial in all except the warmest and coldest parts of the United States. (Chico, Calif.)

62408. *CHRYSANTHEMUM MORIFOLIUM*.* From China. Collected in the Western Hills between the Ming Tombs and the Fa Hua Ssu Temple, by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. A low herbaceous plant with basal tufts of evergreen foliage and widely branched 2-foot stalks of small pink to white single flowers from September until frost. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

72790. *CISTUS CORBARIENSIS*. Cistaceae. Rockrose. From Kew, England. Presented by the Director, Royal Botanic Gardens. A white-flowered shrub 2 feet high, native to Spain. For trial in the southern states. (Chico, Calif.)

74676. *CISTUS MONSPELIENSIS*. Montpellier rockrose. From Brignoles, France. Presented by R. Salgues, Brignoles Botanic Station. An evergreen shrub, 2 to 4 feet high, with erect much-divided branches, very narrow sessile, dark-green hairy leaves, and white flowers, an inch across, in terminal compact heads. Native to southern Europe and northern Africa. For trial in the southern United States. (Chico, Calif.)

70900. *CISTUS SYMPHYTIFOLIUS*. Rockrose. From Orotava, Teneriffe, Canary Islands. Collected by David Fairchild, agricultural explorer. A species something like the more familiar *C. laurifolius* but with deep rose-red flowers, blotched yellow at the base, and somewhat narrower foliage. For trial in southern California and southern Florida. (Chico, Calif.)

102219. *CLEMATIS GLAUCA AKEBIOIDES*. From France. Received from Dir. des Ecoles, forestieres des Barres, Nogent-sur-Vernisson, Loiret, France. A slender climber up to 10 feet high, native to western China. The pinnate to bipinnate leaves have 2-lobed to 3-lobed ovate leaflets and the flowers are bronze yellow. For trial in the upper south and the milder parts of the northern states. (Glenn Dale, Md.)

72793. *CLEMATIS GRATA GRANDIDENTATA*. From England. Presented by Sir. A. W. Hill, Director, Royal Botanic Garden, Kew. A climbing shrub, 9 to 30 feet high, with smooth leaves, silky hairy on the veins, and cream-colored flowers 1 inch across, in axillary clusters of three in leafless panicles. For trial on the Pacific coast and in the southern states. (Chico, Calif.)

102220. *CLEMATIS KOREANA*. From France. Received from Dir. des Ecoles, forestieres des Barres, Nogent-sur-Vernisson, Loiret, France. A prostrate vine, native to Chosen, with trifoliolate leaves having coarsely dentate, sharp-pointed leaflets 2 to 4 inches long, usually 3-lobed or 3-parted. The yellow to dull-violet, bell-shaped, nodding flowers, 1 to 2 inches long, are solitary and axillary. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

76111. *CLEMATIS SERRATIFOLIA*. From France. Presented by L. Parde, Directeur, Arboretum des Barres et Fruticetum Vilmorinianum, Nogent sur Vernisson, Loiret. A woody climber 10 feet long, native to Chosen. The biternate leaves are made up of ovate-lanceolate serrate leaflets and the large, yellow flowers with purple filaments are 2 inches across and appear in the autumn. For trial in all except the warmest and coldest parts of the United States. (Chico, Calif.)

102221. *CLEMATIS TANGUTICA OBTUSIUSCULA*. From France. Received from Dir. des Ecoles, forestieres des Barres, Nogent-sur-Vernisson, Loiret, France. A handsome climbing shrub, native to Central Asia, with sharply cut compound leaves and very large, solitary nodding flowers which are borne on erect stems 6 inches long, arched at the tip. The golden-yellow sepals are about 2 inches long, with recurved tips. For trial in the upper south and the milder parts of the northern states. (Glenn Dale, Md.)

100165. *CODONOPSIS* SP. Collected by the Forrest Expedition to southwestern China and presented by Major Lionel de Rothschild, London, England. The species of *Codonopsis* are campanula-like, twining or decumbent, perennial plants, often semihardy, and having showy blue, whitish, or greenish flowers. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

103743. *COLUTEA ORIENTALIS*. Bladder-senna. Presented by the Director, Tiflis Botanic Garden, Tiflis, Georgia, Caucasus, U. S. S. R. A leguminous shrub 6 feet high, with pale glaucous leaves composed of 7 to 11 broad-obovate leaflets about one-half inch long. The flowers, 5/8 inch long, are reddish brown, with yellow blotch on standard, and are borne in 2 - 5 flowered racemes. They are followed by inflated papery pods. Probably hardy north to southern Ohio and Pennsylvania. (Glenn Dale, Md.)

90789. *CCRNUS CONTROVERSA*. Giant Dogwood. From Japan. Presented by M. Tozawa, Director, Forest Experiment Station, Keijo. A Japanese tree up to 60 feet high, with a trunk 7 feet in girth. In general habit much like our native dogwood, with long horizontal branches, sometimes touching the ground, but with small yellowish white flowers in flat clusters 6 or 7 inches in diameter, followed by dark blue or blackish fruits much like our native cornels. For trial in all except the coldest parts of the United States. (Glenn Dale, Md.)

56304. *COTONEASTER BUXIFOLIA VELLAEA*. From western China. Collected by J. F. Rock, agricultural explorer, Bureau of Plant Industry. An evergreen, more or less procumbent shrub with rather crowded small obovate gray-green leaves 1/2 inch long, densely hairy beneath, and small clusters of round dull-red berries 1/4 inch in diameter. Probably hardy as far north as the Ohio River. (Chico, Calif.)

80394. COTONEASTER HARROVIANA. From Paris, France. Presented by Vilmorin-Andrieux & Co. An evergreen shrub, native to Yunnan, China, about 6 feet high, of a loose spreading habit, with shining dark-green bristle-tipped leaves, dense corymbs of white flowers, and red fruits. For trial in the middle and lower south and on the Pacific coast. (Glenn Dale, Md.)

82401. CRATAEGUS PINNATIFIDA. Hawthorn. From Heijo, Chosen. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. An ornamental shrub or small tree, to 20 feet high, with elliptic-ovate, pinnately cleft leaves, lustrous, dark green above and pale beneath. The whitish flowers, with pink stamens, are in corymbs. Fruits usually sub-globose, dark red, about 5/8 inch in diameter. For trial from Lake Erie southward and on the Pacific Coast. (Glenn Dale, Md.)

99157. CUNNINGHAMIA LANCEOLATA.* Chinese-fir. From Kweichow Province, China. Presented by Albert N. Steward, College of Agriculture, University of Nanking, Nanking. A handsome evergreen forest tree related to Araucaria, 65 to 80 feet tall, and of broad pyramidal habit, growing on rocky slopes between 1,800 to 4,000 feet altitude. The linear-lanceolate leaves are 1 - 3 inches long. The tree sprouts from the roots if cut back. For trial from Norfolk, Va., southward and on the Pacific coast. (Glenn Dale, Md.)

67353. CYTISUS MONSPESSULANUS. Broom. From the Canary Islands. Presented by the Director, Cambridge Botanic Garden, England. A Leguminous shrub about 10 feet high with fragrant bright-yellow flowers in small racemes. For trial in the southern United States. (Chico, Calif.)

65584. CYTISUS PROLIFERUS. Tagasaste. From Santa Cruz, Palma, Canary Islands. Procured by the Allison V. Armour Expedition. A stout leguminous shrub, up to 12 feet high, of rather lax habit, with long slender branches and green trifoliolate leaves with silky pubescent lower surfaces. The white flowers are in axillary clusters among the branches. It is native to the Canary Islands, where it is considered an excellent drought-resistant forage plant. For trial in the southern United States (Chico, Calif.)

65011. CYTISUS STENOPETALUS. Broom. From the Canary Islands. Collected by David Fairchild, agricultural explorer. A handsome shrub or small tree, 20 feet or less in height, with silky-hairy foliage, and elongated racemes of bright-yellow flowers. In the Canary Islands this shrub is used for feeding goats. For trial in the southern United States. (Chico, Calif.)

101003. DAMNACANTHUS INDICUS.* Rubiaceae. From Japan. Obtained by P. H. Dorsett and W. J. Morse, agricultural explorers, from the Gifu Agricultural Experiment Station, Gifu-ken. A spiny evergreen half-hardy shrub, native to Japan. The small opposite leathery leaves are broadly ovate, and the small fragrant axillary white flowers are followed by coral-red berries which remain on the bush until the flowers of the next season appear. (Glenn Dale, Md.)

93114. DEUTZIA PARVIFLORA. Mongolian deutzia. From China. Presented by Prof. Hsen-Hsu Hu, Fan Memorial Institute of Biology, Peiping. A hardy ornamental shrub 6 feet high, with corymbs of white flowers. Native to Hopei Province, China. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

81154. ECHEVERIA AMOENA. Crassulaceae. From Ventimiglia, Italy. Presented by S. W. McLeod Braggins, Superintendent, La Mortola. A nearly stemless succulent with small dense rosettes of thick leaves and slender scapes 4 to 8 inches high, bearing 1 to 8 red flowers in racemes. Native to Mexico. For trial in southern California and southern Florida. (Chico, Calif.)

93265. ECHINOCEREUS SP. Cactus. Plants from seeds collected by G. N. Collins and J. H. Kempton with the Allison V. Armour Expedition. From La Paz, Lower California. The plants of this genus which are distinctly ribbed, often form large caespitose colonies, are usually low in stature, and generally have very attractive and fairly large yellow, purplish, or scarlet flowers. The spines are relatively slender, and not so long or stout as those of Echinocactus. For indoor culture except in the warmer parts of the southwest and in the Gulf region. (Glenn Dale, Md.)

100692. ESCALLONIA MACRANTHA. From Chile. Collected by MacMillan and Erlanson at Ancud, Chiloe Island. A shrub 4 to 5 feet high, with deep shining-green ornamental foliage and an abundance of rose-red trumpet-shaped flowers about one-half inch across. It is used largely in seaside districts as a hedge plant, and also makes a fine wall plant. For trial in the Gulf region and southern California. (Glenn Dale, Md.)

101007. ESCALLONIA PTEROCLADON. Escalloniaceae. From the Botanic Garden, Cambridge. England. A bushy evergreen shrub 4 to 10 feet high, native to Patagonia. The narrowly obovate leaves, 1 inch long, are slightly toothed, and the small white flowers appearing in summer are in slender racemes 1 to 3 inches long, terminating the short rigid leafy twigs. For trial in the southern states and in California. (Glenn Dale, Md.)

91818. ESCALLONIA PUNCTATA. From Scotland. Presented by W. Wright Smith, Regius Keeper, Royal Botanic Garden, Edinburgh. A very rare shrub, 4 to 5 feet high, with neat evergreen foliage, and bright-red flowers which are distinct from all other escallonias. Native to Chile. For trial in the south Atlantic and Gulf region and on the Pacific coast. (Glenn Dale, Md.)

95516. EUCALYPTUS ALGERIENSIS. From Algeria. Presented by Dr. R. Maire, University of Algiers, Algiers. A hybrid between Eucalyptus rostrata and E. rudis which has become naturalized in North Africa and now covers considerable areas of the hills around Algiers. It differs from E. rudis by its smooth trunk, its small flowers with the hemispherical operculum not beaked, and from E. rostrata by its buds which are white like those of E. rudis. Eucalyptus rudis flowers in the month of December, E. rostrata flowers in July and August, while E. algeriensis flowers in the spring. For trial in the southwest and the Gulf region. (Chico, Calif.)

101965. EUCALYPTUS CINEREA. Silver stringybark. From Institute of Plant Introduction, Leningrad, U. S. S. R. A moderate-sized Australian tree with whitish brown bark, opposite cordate leaves 2 to 4 inches long, and terminal corymbs of small flowers followed by small subglobose fruits. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

90698. *EUCALYPTUS MICROCARPA*. From New South Wales, Australia. Presented by the Director, Botanic Gardens, Sydney. A large tree with gray or white bark, lanceolate coriaceous leaves 4 inches long and panicles made up of clusters of 3 to 7 small flowers followed by very small sub-cylindrical fruits. It is native to Australia. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

81734. *EUONYMUS ALATUS*. Winged spindle-tree. From Akita, Japan. Obtained by P. H. Dorsett, agricultural explorer, Bureau of Plant Industry. A spreading shrub about 8 feet high, having branches usually with corky wings, native to China and Japan. The elliptic leaves, about 2 inches long, become a rich rosy scarlet in autumn. The flowers are inconspicuous and are followed by purplish capsules, opening to show the orange arils. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

81736. *EUONYMUS ALATUS*. From Japan. Collected at Sapporo, Hokushu, by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Same description as for preceding. (Glenn Dale, Md.)

82423. *EUONYMUS ALATUS*. Winged spindle-tree. From Chosen. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, near the village of Ryugakaku, northwest of Heijo. Daido gun. Similar in general to F. P. I. No. 81734, but a form in which the corky wings are rarely present on the branches. (Glenn Dale, Md.)

82424. *EUONYMUS ALATUS*. Winged spindle-tree. From Chosen. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Description the same as for F. P. I. No. 81734. (Glenn Dale, Md.)

103768. *EUONYMUS ALATUS*. Winged spindle-tree. From Chosen. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Description the same as for F. P. I. No. 81734. (Glenn Dale, Md.)

56313. *EUONYMUS HAMILTONIANUS*. From China. Seeds collected by J. F. Rock, agricultural explorer, Bureau of Plant Industry. A large Himalayan shrub which under favorable circumstances becomes a moderate-sized tree, 30 to 35 feet high, with short straight trunk 4 to 5 feet in circumference. The clusters of 15 to 30 greenish white flowers are followed by yellow capsules, the seeds of which are entirely surrounded by a scarlet aril. The fruit begins to ripen in August and the leaves are brilliantly colored in autumn. For trial in the upper south and milder parts of the northern states and on the Pacific Coast. (Glenn Dale, Md.)

65926. *EUONYMUS HAMILTONIANUS*. From Harbin, Manchuria. Obtained by P. H. Dorsett, agricultural explorer. Same description as for preceding.

103773. *EUONYMUS HAMILTONIANUS*. From Ching lung Chiao, China. Collected by Dorsett and Morse, agricultural explorers, Bureau of Plant Industry. Same description as for F. P. I. No. 56313. (Glenn Dale, Md.)

103776. EUONYMUS JAPONICUS. From Japan. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, in Heibya Park, Tokyo. This form is a tree 20 feet high, the fruits of which are said to be 1- to 2-seeded, reddish in color, and borne on rather stiff stems that stand up among the leaves. For trial from Washington, D. C., and Tennessee southward and on the Pacific coast. (Glenn Dale, Md.)

103775. EUONYMUS MAACKII. From Keijo, Chosen. Collected by Dorsett and Morse, agricultural explorers, Bureau of Plant Industry. A large shrub or small tree with narrowly oval leaves about 3 inches long, and small clusters of pink 4-lobed fruits the seeds of which have orange-red arils. Native to northeastern Asia. For trial in all but the coldest and warmest parts of the northern states. (Glenn Dale, Md.)

103740. FEROCACTUS WISLIZENI. Presented by Boyce Thompson Southwestern Arboretum, Superior, Arizona. A large, globular or cylindrical cactus, becoming several feet high with age. The ribs often number 25, and the strongly hooked, white or red spines are 1 to 2 inches long. The yellow or reddish flowers are about 2 inches long, followed by oblong yellow fruits 2 inches in length. Native to northwestern Mexico. For trial in the milder parts of the southwest and in the Gulf region. (Glenn Dale, Md.)

100693. FRANCOA SP. Saxifragaceae. Collected by MacMillan & Erlanson, near Ancud, Chiloe Island, Chile. The francoas are perennial semi-hardy herbs 2 - 3 feet high, with the lyrate leaves basal or nearly so on a central scape and the flowers, 1 inch across, whitish to pink or rose, are in racemes about 6 inches long. This undetermined species grows in shaded moist places; it may be identical with Francoa sonchifolia. (Chico, Calif.)

100649. GARDENIA PSEUDOPSIDIUM. Rubiaceae. From the Philippine Islands. Presented by Arthur F. Fisher, Director, Bureau of Forestry, Manila. A small tree, 9 to 12 feet high, with opposite, lanceolate, acuminate leaves, whitish, solitary, axillary flowers, and round fruits resembling guavas but not edible. For trial in southern Florida and southern California. (Glenn Dale, Md.)

67359. GENISTA SAGITTALIS. Broom. From England. Presented by the Director, Cambridge Botanic Garden. A dwarf procumbent leguminous shrub with ascending or erect branches, hairy oval leaves, and short, terminal racemes of yellow flowers. Native to Europe and western Asia. For trial everywhere except in the coldest parts of the northern states. (Chico, Calif.)

97643. HYPERICUM SP. From India. Presented by W. Hoelz, Himalayan Research Institute, Naggar, Kulu, Punjab. An attractive shrub 4 feet high collected at the forest edge at 8,000 feet altitude. For trial in the southern states and on the Pacific coast. (Glenn Dale, Md.)

100560. HYPERICUM SP. From China. Collected by the Sixth Forest Expedition to Southwestern China and presented by Major Lionel de Rothschild. This undetermined species is closely related to Hypericum hookeri. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

100559. *HYPERICUM PATULUM HENRYI*. Henry hypericum. From China. Collected by the Sixth Forest Expedition to Southwestern China and presented by Major Lionel de Rothschild. This variety is hardier than the typical form and sturdier in habit. The ovate dark-green leaves are 2 to 3 inches long and the rich yellow flowers are about 2 inches wide. Native to Yunnan. Probably hardy as far north as the Ohio River. (Glenn Dale, Md.)

91253. *ILEX INTEGRA*. Holly. From Japan. Obtained from the Chugai Shokubutsu Yen, Yamamoto, Kawabegun, near Kobe. An evergreen Japanese shrub or tree, up to 40 feet in height, with oval to oblong, usually entire leaves, 2 to 3 inches long, and globular or ovoid, red berries. Plants very small. For trial on the Pacific coast and in the eastern states as far north as Philadelphia. (Glenn Dale, Md.)

91518. *ILEX LATIFOLIA*. Holly. From Japan. Purchased from the Yokohama Nursery Co., Yokohama. A Japanese evergreen holly, one of the most attractive of the genus, which sometimes develops into a tree 60 feet tall. The glossy green leaves, 3 to 7 inches long, are oval or narrowly oblong, and the red berries, about one-third of an inch in diameter, are produced in dense clusters. Probably hardy as far north as Philadelphia and the Ohio River. (Chico, Calif.)

85870. *ILEX ROTUNDA*. Holly. From Japan. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. A tree up to 35 feet high, with entire leaves 2 - 4 inches long and bearing clusters of small red berries. Native to Japan and Korea. For trial in the southern states. (Glenn Dale, Md.)

75716. *ILEX SERRATA*. Fine-tooth holly. From Japan. Collected by R. K. Beattie, Bureau of Plant Industry. A slender ornamental deciduous Japanese shrub about 15 feet high, with oval, finely serrate leaves and small bright-red berries. For trial in the south and milder parts of the northern states. (Glenn Dale, Md.)

85735. *ILEX SERRATA*. Fine-tooth holly. From Japan. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Description same as for preceding (F. P. I. No. 75716.) (Glenn Dale, Md.)

82370. *JASMINUM HETEROPHYLLUM*. From Nancy, France. Plants obtained from Lemoine & Sons. A stout shrubby jasmine with shiny, alternate, narrowly oval leaves up to 5 inches long. The flowers are yellow, up to one-third of an inch long, and occur in compound pubescent cymes. Native to China. For trial in the middle and lower south and in California. (Glenn Dale, Md.)

76581. *JASMINUM HETEROPHYLLUM GLABRICYMOSUM*. Jasmine. From Elstree, Herts, England. Plants presented by the late Hon. Vicary Gibbs, Aldenham House Gardens. Similar to the preceding (F. P. I. No. 82370), but with glabrous inflorescence. For trial in the southern states and on the Pacific coast. (Glenn Dale, Md.)

77919. *KALANCHOE SP.* From Madagascar. Collected by Charles F. Swingle, Bureau of Plant Industry, and Dr. Henri Humbert, University of Algiers, Algeria. A somewhat woody succulent plant, native to Madagascar, which becomes 6 feet high, but requires bushes or other support to stand erect. The stem terminates in a lax corymb of deep-rose flowers. For indoor culture only except in southern Florida and southern California. (Glenn Dale, Md.)

91991. *KALANCHOE FLAMMEA*. From Canada. Presented by J. Adams, Division of Botany, Central Experimental Farm Ottawa. A stout erect pale-green succulent, 1 foot high, native to Somaliland, Africa. The obovate, entire or obscurely crenulate leaves are over 3 inches long, and the small flowers are in flat cymes 4 to 5 inches across. The corolla tube is pale yellow, while the petals are bright orange-red. For indoor culture only except in the Gulf region and southern California. (Glenn Dale, Md.)

95552. *KALANCHOE GLOBULIFERA COCCINEA*. From Germany. Presented by Robert Blossfeld, Potsdam. A stout-branched succulent perennial up to a foot high, with elongated, thick, irregularly toothed, obovate-spathulate leaves over 2 inches long, and numerous bright-scarlet flowers in large terminal corymblike cymes. Native to Madagascar. For indoor culture only except in the Gulf region and southern California. (Glenn Dale, Md.)

78431. *KALANCHOE SYNSEPALA*. From Madagascar. Collected by Charles F. Swingle, Bureau of Plant Industry, and Dr. Henri Humbert, University of Algiers, Algeria. An erect succulent perennial, native to central Madagascar, with the lower leaves opposite, sessile, oblong-spathulate and green with a red margin. The small whitish flowers are in dense terminal cymes. For indoor culture only except in the Gulf region and southern California. (Glenn Dale, Md.)

90663. *LARIX DAHURICA*. Dahurian larch. From Manchuria. Obtained by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, from the Forestry Department of the Agricultural Experiment Station, South Manchurian Railway. A tree which grows to 100 feet in height, with long horizontal branches, reddish or yellowish branchlets, bright-green flattened leaves, and ovoid cones an inch long. For trial in the northern states. (Glenn Dale, Md.)

97946. *LARIX DAHURICA*.* Dahurian larch. From Chosen, Japan. Presented by M. Tozawa, Director, Forest Experiment Station, Keijo. Received as variety Koreana. Similar to preceding. (Glenn Dale, Md.)

76037. *LIGUSTRUM ACUMINATUM*. Privet. From St. Jean le Blanc, Loiret, France. Presented by Edmond Versin. Variety macrostachyum. A Japanese upright shrub with spreading branches, sometimes 8 feet tall. The ovate leaves are acuminate and the small white flowers, borne in large panicles, are followed by lustrous black fruits. For trial in the south and the milder parts of the northern states. (Glenn Dale, Md.)

72876. *LIGUSTRUM WALKERI*. Privet. From Nogent sur Vernisson, Loiret, France. Presented by L. Parde, Directeur, Arboretum des Barres et Fruticetum Vilmorinianum. An evergreen shrub with oval or lanceolate leaves and large panicles of white flowers. Native to southern India. For trial in the Gulf region and southern California. (Glenn Dale, Md.)

98863. *LONCHOCARPUS DOMINGENSIS*. From the West Indies. Collected by the Allison V. Armour Expedition. The Savoneth de Riviere, of Martinique. A medium sized handsome spreading tree with long slender branches, large pinnate leaves and violet or rose-colored flowers. A leguminous tree said to be of promise for frost-free localities. For trial in the warmest parts of southern Florida and southern California. (Glenn Dale, Md.)

65021. *LONICERA IMPLEXA*. Honeysuckle. From the Mediterranean region. Collected by David Fairchild, agricultural explorer. A much-branched, shrubby, evergreen honeysuckle with perfoliate, oval or narrowly oblong leaves and pink fruits in the leaf axils. For trial in the Gulf states and California. (Chico, Calif.)

65022. *LOTUS GLAUCUS*. From the Mediterranean region. Collected by David Fairchild, agricultural explorer. A tender, herbaceous, deep-rooted perennial, about a foot high, with glaucous-green foliage; closely related to the clovers. It is native to dry, rocky hillsides in the Canary Islands and Madeira. For trial as a cover plant in the Southwest. (Chico, Calif.)

81174. *MELALEUCA ACUMINATA*. Myrtaceae. From Ventimiglia, Italy. Presented by La Mortola Garden. A glabrous, bushy shrub with slender branches, mostly opposite, lanceolate leaves a quarter of an inch long; and lateral clusters of small, whitish flowers. Native to Australia. For trial in the Gulf States and California. (Chico, Calif.)

90712. *MELALEUCA ARMILLARIS*. Drooping melaleuca. A tall shrub with gracefully drooping branchlets, narrowly linear leaves less than an inch long, and cylindrical spikes, 2 inches long, of small white flowers. Native to Australia. For trial in southern California and the Gulf region. (Chico, Calif.)

90713 and 90859. *MELALEUCA ELLIPTICA*. From New South Wales, Australia. Presented by the Director, Botanic Gardens, Sydney. A tall evergreen shrub, native to Western Australia, with elliptical evergreen leaves half an inch long, and cylindrical spikes of large showy red flowers. For trial in California and the Gulf region. (Chico, Calif.)

64803. *MELALEUCA HOLOSERICEA*. From Blackwood, South Australia. Seeds presented by Edwin Ashby, "Wittunga." A bushy shrub from Western Australia, generally 2 to 3 feet high, with the leaves and branches covered with white pubescence. The leaves are linear and $\frac{1}{2}$ -inch long. The pink flowers are in dense terminal heads. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

90860. *MELALEUCA HYPERICIFOLIA*. Dotted melaleuca. From New South Wales, Australia. Presented by the Director, Botanic Gardens, Sydney. A tall glabrous shrub with opposite lanceolate leaves 1 to 2 inches long, dotted beneath. The rich-red flowers are borne in dense spikes 2 inches long and nearly as wide. It is native to Australia. For trial in southern California and the Gulf region. (Chico, Calif.)

93840. *MELALEUCA HYPERICIFOLIA*. Dotted melaleuca. From Perth, Western Australia. Presented by Miss Ida W. Richardson. Same description as preceding. (Chico, Calif.)

90715. *MELALEUCA LEUCADENDRON*. Cajuput tree. From New South Wales, Australia. Presented by the Director, Botanic Gardens, Sydney. The cajuput tree of India and Australia reaches a height of 80 feet, and can be grown on the edges of salt water swamps where no Eucalyptus will survive. The wood is hard, close-grained and imperishable underground. The leaves yield as much as 2 per cent of the well known cajuput oil, closely allied to that of Eucalyptus. For trial in southern California and the warmer parts of the Gulf region. (Chico, Calif.)

75565. MELALEUCA NODOSA. From Melbourne, Australia. Obtained from the Melbourne Botanic Gardens, through Miss Anne MacIlvaine, Trenton, N. J. A tall smooth shrub, native to Australia, with rigid awl-shaped leaves and small heads, half an inch in diameter, of pale-yellow flowers. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

90716. MELALEUCA PUBESCENS. From New South Wales, Australia. Presented by the Director, Botanic Gardens, Sydney. A tall shrub or small tree native to Australia. The small, linear leaves, half an inch long, are crowded on the pubescent branches and the small white flowers are borne in loose, cylindrical spikes. For trial in southern California and southern Florida. (Chico, Calif.)

75567. MELALEUCA STYPHELIODES. From Melbourne, Victoria, Australia. Obtained from the Melbourne Botanic Gardens, through Miss Anne MacIlvaine, Trenton, N. J. A tall Australian tree, sometimes 80 feet high, with thick spongy bark. The leaves are very small, and the small creamy white flowers are in dense spikes about 2 inches long. For trial in the warmer parts of California and the Gulf region. (Chico, Calif.)

67086. MELALEUCA WEBSTERI. From Blackwood, South Australia. Presented by Edwin Ashby, "Wittunga." An Australian shrub with opposite, narrowly oblong thick leaves about one-third of an inch long, and roundish heads of small white flowers. For trial in the warmer parts of California and the Gulf Region. (Chico, Calif.)

64192. MYOPORUM INSULARE. From Morocco, Africa. Collected by David Fairchild, agricultural explorer, Bureau of Plant Industry. The principal hedge plant and windbreak of the Moroccan coast. It stands clipping well, grows easily from cuttings, is an evergreen of a pleasing dark-green color, will stand a few degrees of frost and makes a dense windbreak. For trial along the coast of the milder parts of California and the south. (Chico, Calif.)

63629. MYROXYLON SENTICOSUM. Flacourtiaceae. From Canton, China. Collected by F. A. McClure, agricultural explorer of the Bureau of Plant Industry. Chinese name Kai na lak. A very ornamental and shapely large shrub or small tree, having dense, glossy foliage, and producing an abundance of small, dark-red fruits which are borne in short-stemmed clusters along the branches. For trial in the warmest parts of California and the Gulf region. (Chico, Calif.)

90065. NECMAMMILLARIA SP. Cactus. From Mexico. Collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. A cactus with pink flowers, found on open, bare rock. For trial indoors only except in the milder parts of the southwest. (Glenn Dale, Md.)

103741. NECMAMMILLARIA MACDOUGALII. Presented by Boyce Thompson Southwestern Arboretum, Superior, Arizona. A flattened globular cactus 3 to 4 inches in diameter, with a carrot-shaped root. The axils of the flattened, somewhat angled tubercles often bear long white wool, and from the tops of the tubercles appear 10 to 12 radial spines, white or yellowish and about $\frac{1}{2}$ -inch long. The cream-colored flowers are an inch or more long, and are followed by club-shaped red fruits. Native to southeastern Arizona. For trial indoors only except in the milder parts of California and the southwest and in the Gulf region. (Glenn Dale, Md.)

81180-1-2-3. NECMAMMILLARIA MAGNIMAMMA. From Ventimiglia, Italy. Plants grown from seeds of four varieties as listed hereunder, presented by the Superintendent, La Mortola. The species is a globular cactus, 4 inches in diameter, with very milky juice, often in a colony of 25 or more. The conical tubercles, two-fifths of an inch high, are crowned by three to five unequal stout whitish or colored spines, and the cream-colored flowers are borne in the axils of the tubercles near the top of the plant. Native to central Mexico. (Glenn Dale, Md.)

81180. Plants from seeds received as No. 1014, Mammillaria centricirrha.

81181. Plants from seeds received as No. 1015, Mammillaria centricirrha krameri.

81182. Plants from seeds received as No. 1017, Mammillaria centricirrha.

81183. Plants from seeds received as No. 1022, Mammillaria schmidtii.

98040. NERTERA DEPRESSA.* Bead-plant. Rubiaceae. From Chile. Collected near Ancud, Chiloe Island, by H. G. MacMillan and C. O. Erlanson, Bureau of Plant Industry. A procumbent herbaceous plant with red or orange-red berries. Native name Madresalva. For trial indoors only except in southern California and the Gulf region. (Glenn Dale, Md.)

67087. ORTHROSANTHUS MULTIFLORUS. Iridaceae. From Blackwood, South Australia. Presented by Edwin Ashby, "Wittunga." An Australian irislike plant with a short perennial rhizome, and flat, grasslike radical leaves up to 2 feet in length. The blue flowers are in a several-flowered oblong spike, borne on a stem 1 to 2 feet high. For trial in southern California and the Gulf region. (Chico, Calif.)

103787. PAPAVER SCHINZIANUM. Poppy. Plants grown from seed presented by the Botanic Garden, Edinburgh, Scotland. A perennial poppy, said to be a hybrid of P. rupifragrum and a species allied to P. lateritium, resembling the first species in flower. Plants flowering at Washington, D. C., have been of an orange-apricot hue, but some variation may be expected. For trial in all except the warmest parts of the United States. (Glenn Dale, Md.)

23234. PHYLLOSTACHYS SP. From China. A hardy evergreen bamboo of running type, up to 20 feet high and with dense foliage much resembling Phyllostachys aurea but without crowding of the lower nodes of the culm, common in that species. Spreads by vigorous rhizomes (underground stems) from which new culms arise. Grows to full size only in grove form, in area at least 40 feet across. Grove kept within bounds by artificial means. Culms useful for plant stakes, small fishing poles, etc. Plants withstand temperatures of 5° to 8° below zero F. Not less than 25 plants (shipping weight about 35 lbs.) will be sent to an experimenter. These are for planting in one area to start a grove. The first season, however, the plants should be grown $1\frac{1}{2}$ to 2 feet apart in a nursery row, in well fertilized soil, and be freely watered in dry weather. In the late winter or early spring of the second year they should be transplanted with a ball of earth to the permanent situation, on good well-drained land, spaced 10 feet apart each way. Well-rotted manure or a good commercial fertilizer should be placed in the hole. For trial on the Pacific coast. (Chico, Calif.)

55713. PHYLLOSTACHYS SP. Stake-and-forage bamboo. From China. A hardy evergreen bamboo of running type, up to 25 feet high, similar in habit and general appearance to preceding (F.P.I. No. 23234) but slightly less hardy and with somewhat less dense foliage. Flattened sides of internodes yellowish. Use of leaves for forage is experimental. This bamboo has been previously sent out under the name Phyllostachys nevinii but is now found not to agree with specimens of that species in the Kew Herbarium. The conditions under which plants will be furnished to experimenters, and the cultural requirements and uses are the same as for F.P.I. No. 23234. For trial on the Pacific Coast. (Chico, Calif.)

12180 and 24760. PHYLLOSTACHYS RETICULATA (P. bambusoides). Giant timber bamboo. Native to milder parts of China and Japan. A hardy evergreen bamboo of running type, up to 70 feet high under favorable conditions. It is injured by temperatures near zero Fahr. Small culms useful for same purposes as those of preceding two species (F.P.I. Nos. 23234 and 55713); larger ones, for light construction and numerous other purposes. The conditions for the furnishing of plants and the requirements for culture are similar to those for the preceding two species, but the minimum area required for attainment of maximum growth is about 75 feet across and the time at least 15 years. Available for trial only in the Pacific coast region. (Chico, Calif.)

89604. PINUS BUNGEANA.* Lacebark pine. From China. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry, in the grounds of the Young Ling Ming Tomb. A slow-growing tree sometimes 100 feet high, native to China, with the bark of mature trees exfoliating in large scales, leaving white areas which on the old trees become chalky white. It is known also as the white-barked pine. For trial in all except the warmest and coldest parts of the United States. (Glenn Dale, Md.)

92056. PINUS BUNGEANA. Lacebark pine. Same as the preceding but obtained in Manchuria. (Glenn Dale, Md.)

82484. PINUS TABULAEFORMIS.* From Chosen. Presented by the Forest Experiment Station, Keijo. A pine up to 75 feet high, with dark-gray bark on the trunk, red on the branches, and orange or greyish-yellow branchlets. The glaucescent leaves, usually two in a cluster, are stout and 3 to 6 inches long, and the ovoid cones, 2 to 4 inches long, are pale tawny yellow, changing to dark brown and persisting for several years. For trial in the northern states. (Glenn Dale, Md.)

90793. PINUS TABULAEFORMIS. Same description as for preceding number. (Glenn Dale, Md.)

97949. PINUS TABULAEFORMIS. Same description as for F. P. I. No. 82484. (Glenn Dale, Md.)

85697. PINUS YUNNANENSIS. Yunnan pine. From Likiang, Yunnan, China. Collected by J. F. Rock, National Geographic Society. One of the most common trees of Yunnan, varying in height from 30 to 80 feet and with a very straight or crooked trunk, depending on the location and exposure. It prefers well-drained soils, and grows at altitudes ranging from 9,000 to 11,000 feet. For trial in all except the coldest parts of the northern states. (Glenn Dale, Md.)

98378. PINUS YUNNANENSIS. Yunnan pine. From China. Presented by H. K. Fu, Director Botanic Garden, Sun Yat-Sen Memorial Park, Nanking. Description the same as for preceding number. (Glenn Dale, Md.)

92522. POPULUS NIGRA BETULIFOLIA. Poplar. From Spain. Procured from Juan Levy, la Quinta, Granada. Spanish name Chopo. A form of poplar, striking because of the almost complete absence of true lateral branches, the stems being clothed with twigs which, as is common in poplars, are sooner or later thrown off by separative layers near the base. Because of this habit of growth, the trees can be planted very close together and, as they are rapid growers, they yield an enormous amount of wood. For trial in all except the coldest parts of the northern states. (Glenn Dale, Md.)

99971. POTENTILLA FRUTICOSA. Plants from seed collected by the Forrest Expedition to southwestern China and presented by Major Lionel de Rothschild, London, England. A handsome shrub up to 5 feet high, with pinnate leaves having usually 5 sessile leaflets $\frac{1}{2}$ - 1 inch long. Flowers yellow, about 1 inch across. For trial in all except the warmer parts of the United States. (Glenn Dale, Md.)

99973. POTENTILLA FRUTICOSA. Plants from seed collected by the Forrest Expedition to southwestern China and presented by Major Lionel de Rothschild, London, England. Similar to the preceding but of dwarf habit. (Glenn Dale, Md.)

38282. PRUNUS ARMENIACA ANSU. Apricot plum. From Shantung, China. Collected by F. N. Meyer, agricultural explorer. This species produces a very delicious, golden yellow fruit with reddish blush. The fruit is about 2 inches in diameter. Seems to be a good shipper. For trial in the Gulf states and California. (Chico, Calif.)

76202. PRUNUS SALICINA. Japanese Plum. From New Zealand. Obtained from George A. Green, New Zealand Association of Nurserymen. Purple King. This handsome fruit is nearly spherical, about 2 inches in diameter and flattened at the apex. Skin thick, tough, deep purplish red and covered with a glaucous bloom. Flesh yellow, of peculiar firm texture, and of fair flavor. The fruit is a cling and ripens at Chico, Calif., very early in August. It should be of value at least as a home fruit in localities to which it is adapted. These plants are on Indian Blood peach stocks, F. P. I. No. 48508. (Chico, Calif.)

31652. PRUNUS SALICINA X CERASIFERA MYROBALANA. Methley Plum. From Natal, South Africa. Presented by W. J. Newberry, Curator, Botanic Gardens. This plum has attracted wide and favorable comment in California and Texas. In Butte County, California, the trees began bearing at two years from planting, maturing fruit late in May. In Texas, where the tree has withstood severe drought and low temperatures, the fruit matures early in May, and is perhaps the earliest ripening plum in the country. The fruits are of good size, about fifteen to the pound, with dark reddish skin and firm dark-red flesh of the finest texture and of pleasant flavor. They are excellent for shipping. Thrives on peach stock. These plants are on Indian Blood peach stocks. (Chico, Calif.)

91527. *PRUNUS SIMONII*. Simon plum. A superior variety of the Simon-plum, of uncertain origin, growing at the U. S. Plant Introduction Garden, Chico, Calif. The quality of the fruit is said by pomologists to be considerably higher than that of other known forms of the species, and there is less bitterness in the skin. The other known forms apparently have been of interest mainly to the breeder, while this strain may prove of value as it is, at least as a home fruit. It deserves careful testing. Plants on Indian Blood peach stocks, F. P. I. No. 48508. For trial in all but the warmest and coldest parts of the United States. (Chico, Calif.)

61938. *PTEROCARYA STENOPTERA*. Juglandaceae. Chinese wingnut. From China. Collected from the Bubbling Well Cemetery, a short distance from the grave of Frank N. Meyer, by P. H. Dorsett, agricultural explorer of the Bureau of Plant Industry. A handsome ornamental tree up to 60 feet high, with pinnate leaves 6 to 12 inches long having oblong, acute leaflets 2 to 4 inches long. The long pendulous catkins when the tree is in flower or fruit add to its attractiveness. For trial on the Pacific coast and in the southern states. (Chico, Calif.)

72814. *PYRACANTHA CRENATO-SERRATA*. Firethorn. From the Himalayas. Presented by Sir A. W. Hill, Director, Royal Botanic Gardens, Kew, England. A spiny evergreen shrub up to 9 feet high, with young branchlets rusty-pubescent, and elliptic to obovate-oblong leaves about 1 to 2 inches long, lustrous dark green above and lighter beneath. The coral-red fruits are a quarter of an inch across. For trial in the southern half of the United States. (Chico, Calif.)

88607-8. *QUERCUS ACUTISSIMA*. Oak. From Chosen. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. A half-evergreen tree, becoming 50 feet high, native to the forests of northern Japan and China, with attractive shining green, chestnut-like foliage, paler beneath. Probably tender north of southern Ohio. (Glenn Dale, Md.)

89698. *QUERCUS ACUTISSIMA*. Oak. From China. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. Same description as for F.P.I. No. 88607. (Glenn Dale, Md.)

103774. *QUERCUS SERRATA*. From near Kawazoe, Japan. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. A handsome tree, to 45 feet high, with lustrous, oblong-obovate to ovate-lanceolate, serrate, bright-green leaves which remain green until late autumn. For trial from Massachusetts southward and on the Pacific coast. (Glenn Dale, Md.)

95067. *RHUS VIMINALIS*.* From the Union of South Africa. Presented by F. Walton Jameson, City Engineer, Kimberley. Native name Karree boom. A hardy evergreen tree up to 30 feet high and of equal spread, reported to withstand drought and some frost. It grows readily from seeds, cuttings, or poles or stumps set in moist ground and kept moist until growth starts. The tree is said to prefer a thin, limestone soil but to thrive on other soils. It is considered an excellent timber for gate and fence posts. In South Africa, sheep and goats are reported to browse on the foliage, and the sweetish fruits to be eaten by children and poultry. The karree

boom should be tested as a street or shade tree as it is stated to be hardier and more ornamental than Schinus molle, which it resembles in habit. For trial more especially in the southwest but also in less humid localities of the Gulf region. (Chico, Calif.)

75851. SALIX MATSUDANA. Willow. From France. Plants obtained from Vilmorin-Andrieux & Co., Paris. Variety tortuosa. This crooked-branched variety of willow is of odd appearance and will be of some interest on this account alone. The species, a tree up to 40 feet high, is native in north China, where it grows well under scanty summer rainfall. The variety tortuosa should be tested in the semiarid regions of the northern and northwestern United States. (Glenn Dale, Md.)

90075. SALVIA MEXICANA MINOR.* Sage. From Mexico. Collected by Dr. Donald Reddick, Cornell University, in collaboration with Paul Russell and Max Souviron, Bureau of Plant Industry. An ornamental plant up to 3 feet high, with handsome blue flowers, collected at 10,000 feet altitude. For trial in the Gulf region and California, where it probably will be perennial rooted. (Glenn Dale, Md.)

99194. SOREUS SP. Mountain-ash. From Kweichow Province, China. Presented by Albert N. Steward, Department of Botany, College of Agriculture, University of Nanking, Nanking. From Niutoushan, Fangchingshan, Kiangkouhsien, at 4,000 feet altitude. A tree up to 35 feet high and 4 inches in diameter with spreading branches, growing on a rocky forest slope. For trial south of the Great Lakes and in the Pacific Northwest. (Glenn Dale, Md.)

99753. SPIRAEA MICRANTHA. From Darjeeling, India. Presented by the Curator, Lloyd Botanic Garden. A very attractive shrub of rather lax habit found in the eastern temperate Himalayas between 5,000 and 10,000 feet altitude. The narrowly ovate, doubly toothed leaves are sometimes 7 inches long and the small pale-pink flowers, $\frac{1}{4}$ inch across are borne in long loose panicles of small cymes. (Glenn Dale, Md.)

62392. STRANVAESIA DAVIDIANA SALICIFOLIA.* Malaceae. Native to western China. Plants grown from seeds presented by the Director, Royal Botanic Garden, Kew, England. A shrub or small tree having willow-like leaves, small white flowers in terminal clusters, and red fruits. The leaves remain green in winter instead of becoming purplish underneath as in the variety undulata. For trial in the middle and upper south and in California. (Glenn Dale, Md.)

73449. STRANVAESIA DAVIDIANA UNDULATA. Native to western China. Plants grown from seeds presented by the late Hon. Vicary Gibbs, Aldenham House Gardens, Elstree, Herts, England. A low spreading evergreen shrub, or occasionally a small tree. The leathery oval leaves, with sinuate margins, are glossy green and 1 to 3 inches long; the lower surfaces become purplish in winter. The white flowers, about half an inch across, appear in terminal clusters. The greatest charm of this shrub as an ornamental lies in the abundant crop of bright-red or orange fruits. For trial in the middle and upper south and in California. (Glenn Dale, Md.)

80214 and 97822. *TURRAEA OBTUSIFOLIA*. Meliaceae. From Los Angeles, Calif. Presented by P. D. Barnhart. An attractive dwarf evergreen shrub 4 to 6 feet high which bears, between October and March, an abundance of white flowers having slender petals about an inch long. Native to southern Africa. For trial in southern California and the Gulf region. (Chico, Calif.)

101223. *VAGNERA PANICULATA*. Convallariaceae. Collected near Irazu Volcano, Costa Rica, by H. E. Stork, Professor of Botany, Carleton College, Northfield, Minn. An epiphytic perennial, native to Central America. The ovate-lanceolate, long-acuminate leaves are 5 to 6 inches long, and the snow-white flower panicles are 2 inches long. For trial in the Gulf region. (Glenn Dale, Md.)

101405. *VIOLA IRCUTIANA*. Violet. From B. W. Skvortzow, Harbin, Manchuria. A perennial violet, native to dry hilly regions on the River Kaja, Siberia. It has oval-cordate leaves and rosy-violet flowers and is similar to *Viola variegata* Fischer, but has smaller flowers. For trial in the northern states. (Glenn Dale, Md.)

101406. *VIOLA SEOULENSIS*. Violet. From B. W. Skvortzow, Harbin, Manchuria. A perennial violet with oblong or ovate-oblong, crenate-dentate, long-stemmed leaves an inch long and pale-violet flowers. Native to Chosen. For trial in the northern states. (Glenn Dale, Md.)

101063. *WARIONIA SAHARAE*. Asteraceae. From Morocco. Presented by H. Brayard, Marrakech. A very striking tree composite, native to the Sahara Desert of western Algeria and Morocco, which forms a tree 10 feet or more high and bears great yellow flowers which are almost as large as those of the artichoke. For trial in the milder parts of the southwest and in the Gulf region. (Glenn Dale, Md.)

81806. *ZANTHOXYLUM PIPERITUM*. Japanese prickly-ash. From Japan. Collected by P. H. Dorsett and W. J. Morse, agricultural explorers, Bureau of Plant Industry. A shrub or small tree with pubescent branchlets and slender prickles in pairs. The compound leaves are made up of 11 to 19 oblong-ovate leaflets, and the small corymbs of greenish flowers are followed by red fruits which open and reveal the black seeds. The young leaves are used as a condiment. Native to northern China, Chosen and Japan. For trial in the southern states and California. (Glenn Dale, Md.)

77870. *ZANTHOXYLUM SCHINIFOLIUM*. Rutaceae. From Rochester, N. Y. Collected in Highland Park by Paul Russell, Bureau of Plant Industry. A graceful Japanese shrub or small tree with attractive compound leaves and rather conspicuous clusters of greenish or brownish fruits which open and show the black seeds in autumn. For trial in the upper south and the milder parts of the northern states. (Glenn Dale, Md.)

